

Appl. No. 10/020,695
Amdt. dated October 30, 2003
Reply to Office Action of August 11, 2003

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AMENDMENT TO THE SPECIFICATION:

Please replace the paragraph beginning at page 6, lines 6 with the following amended paragraph:

BRIEF DESCRIPTION OF THE DRAWINGS

The above object and advantages of the present invention will become more apparent by describing in detail a preferred embodiment thereof with reference to the attached drawings in which:

FIG. 1 shows a restriction enzyme map of a phage DNA containing the lectin gene of a mud loach and sequencing strategy;

FIGs. 2a to 2c show the entire DNA sequence of the lectin gene and its regulation site of a mud loach (SEQ. ID. No. 2);

FIG. 3 is a diagram showing a manufacturing process of the expression vector of BFP containing the lectin gene regulation site of a mud loach (pmlectBFP);

FIG. 4 is a diagram showing a manufacturing process of the expression vector of CAT containing the lectin gene regulation site of a mud loach (pmlectCAT);

FIG. 5a is a photograph showing the PCR analysis of pmlectBFP that is transferred into a mud loach liver;

FIG. 5b is a photograph showing the PCR analysis of pmlectCAT that is transferred into a mud loach liver;

FIG. 6a is a photograph showing the RT-PCR analysis of mRNA expressed from pmlectBFP that is transferred into a mud loach liver;

FIG. 6b is a photograph showing the RT-PCR analysis of mRNA expressed from pmlectCAT that is transferred into a mud loach liver;

FIG. 7 is a graph showing the expressions of pmlectBFP and pmlectCAT that are transferred into a mud loach liver;

FIG. 8 is a diagram showing a manufacturing process of the expression vector of a mud loach growth hormone gene containing the lectin gene regulation site of a mud loach (pmlectmGH);

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FIG. 9 is a photograph showing the PCR isolation of the growth hormone gene from a carp gDNA;

FIG. 10 is a diagram showing a manufacturing process of the expression vector of a carp growth hormone gene containing the lectin gene regulation site of a mud loach (pmlectcGH);

FIG. 11 is a photograph showing the pmlectmGH-transgenic mud loach of eight months old compared with its normal mud loach sibling;

FIG. 12 is a graph showing the feed conversion efficiency of the pmlectmGH-transgenic mud loach and non-transgenic sibling group;

FIG. 13 is a photograph showing the PCR analysis of a fast-growing carp group that is deviated from a normal distribution in the pmlectcGH-transgenic group;

FIG. 14 is a photograph showing the pmlectcGH-transgenic carp of seven months old compared with its normal carp sibling; and

FIG. 15 is a graph showing the growth curve of the pmlectcGH-transgenic carp group and non-transgenic sibling group.

Please replace the paragraph beginning at page 10, lines 18 with the following amended paragraph:

The following examples are intended to further illustrate the present invention without limiting its scope.

Example 1: Cloning of a lectin gene regulation site of a mud loach and examination of its ability to induce gene expression

1. Separation of a lectin gene and its regulation site from a gDNA library of a mud loach.

(1) As a probe for identifying a lectin gene from a gDNA library, an EST clone having high affinity with a lectin gene cDNA to be reported was selected among the EST clones expressed in mud loach liver (GenBank=<http://www.ncbi.nlm.nih.gov>). The probe was labeled with digoxigenin 11-dUTP (Roche Molecular Biochemicals, Germany) by using PCR and used for library search.